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# Taxonomic changes in the Neotropical Pericopina and Ctenuchina moths (Erebidae, Arctiinae, Arctiini), with description of new taxa

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**Abstract.** Thirty four species, belonging to 10 genera are treated; one genus and 53 species names are new synonyms, six are revised synonyms; one new and one revised combinations, and six new and three revised species are established; 11 lectotypes are designated.

**Key words:** New species, new synonyms, new combinations, new taxa, reviewed distributions.

## Introduction

In the process of gathering material and checking collections to produce a guide to the Pericopina of Mesoamerica and Mexico (Becker, in prep.), a good deal of information important to the guide was accumulated. As such information does not fit in the style of a guide it has to be dealt with separately prior to publication. Some of the information gathered is not related to the fauna of that region, but is important to a better understanding of the group in itself and so is also included. As the adult imagines of all the Mesoamerican and Mexican species will be illustrated in the guide, they are omitted from this work, being presented only if pertinent to taxa not included in that work. For easy access to the information the taxa in this text are arranged in alphabetical order by genus, and the species in alphabetical order under each genus.

Both Pericopina and Ctenuchina had subfamily status before Lafontaine & Fibiger (2006) ranked the Arctiidae as a subfamily of the Erebidae and, consequently, all groups ranked as subfamily or tribe were downgraded to tribe and subtribe status. Currently the Arctiinae is classified as a member of the Erebidae, a group with family rank, removed from the Noctuidae (Zahiri *et al.*, 2012).

The great number of synonyms is justified by the fact that most Pericopina species are not only highly variable but strongly dimorphic, with sexes being described as different species, often in different genera. As recognized by Lamas & Grados (1996: 22), the current classifications of the group (Hering, 1925; Watson & Goodger, 1986) present '... un exagerado número de géneros y espécies.'

The material studied in this work is deposited in the following institutions: Natural History Museum, London (BMNH), Carnegie Museum of Natural History, Pittsburgh (CMNH), Instituto Biológico, São Paulo (IBSP); Instituto Nacional de Biodiversidad, Costa Rica (INBio); Museo Argentino de Ciencias Naturales, Buenos Aires (MACN); Museum für Naturkunde der Humboldt-Universtät, Berlin (MNHU); University Museum, Oxford (UMO); Instituto de Biología, Universidad Autónoma de México (UNAM); National Museum of Natural History, Washington (USNM); Department of Zoology, Universidade Federal do Paraná, Curitiba (UFPR); and the author's collection (VOB).

Abbreviations follow Anonymous (1978), and Heppner (1984).

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## Nomenclatural summary

**Arctiini**

**Ctenuchina**

*Agyrta* Hübner, [1820]

*dux* (Walker, 1854) (*Dioptis*)
*superba* (Druce, 1885) (*Isostola*), **syn. rev.**
*Coreura* Walker, [1865]
*phoenicides* (Druce, 1884) (*Eucyane*), **comb. n.**
**Pericopina**
*Calodesma* Hübner, [1820]
*maculifrons* (Walker, [1865]) (*Stenele*)
*melanchroia* (Boisduval, 1870) (*Cocastra*), **syn. n.**
*Chetone* Boisduval, 1870
*zuleika* Becker & Goodger, **sp. n.**
*Dysschema* Hübner, 1818
*amphissum* (Geyer, 1832) (*Episteme*)
*fenestrata* (Walker, 1855) (*Pericopis*), **syn. n.**
*vestalis* (Butler, 1871) (*Pericopis*), **syn. rev.**
*arema* (Boisduval, 1870) (*Tebrone*)
*imitata* (Druce, 1910) (*Pericopis*), **syn. n.**
*titan* (Druce, 1910) (*Pericopis*), **syn. n**
*boisduvalii* (Hoeven, 1840) (*Glaucopis*)
*principalis* (Jörgensen, 1935) (*Pericopis*), **syn. n.**
*regalis* (Jörgensen, 1935) (*Pericopis*), **syn. n.**
*rubripicta* (Butler, 1872) (*Pericopis*), **syn. n.**
*trapeziata* (Walker, 1854) (*Daritis*), **syn. n.**
*trapeziata*; (Hering, 1925) (*Pericopis*), *partim*, female
*woodii* (Butler, 1867) (*Mazaeras*), **syn. n.**
*centenarium* (Burmeister, 1879) (*Eucharia*)
*jaonis* (Strand, 1911) (*Pericopis*), **syn. rev.**
*eurocilia* (Cramer, 1777) (*Phalaena*)
*anadema* (Druce, 1907) (*Pericopis*), **syn. n.**
*aorsa* (Boisduval, 1870) (*Chetone*), **syn. n.**
*bivittata* (Walker, 1854) (*Pericopis*), **syn. n.**
*daphne* (Druce, 1885) (*Pericopis*), **syn. n.**
*disjuncta* (Walker, 1856) (*Pericopis*), **syn. n.**
*flavimedia* (Monte, 1933) (*Pericopis*), **syn. n.**
*fulgorata* (Butler, 1871) (*Pericopis*), **syn. n.**
*hypoxantha* Hübner, 1818, **syn. n.**
*leonina* (Butler, 1872) (*Pericopis*), **syn. n.**
*leptoptera* (Perty, [1833]) (*Sericaria*), **syn. n.**
*molesta* (Hering, 1925) (*Pericopis*), **syn. n.**
*nigrivenata* (Hering, 1925) (*Pericopis*), **syn. n.**
*parviflava* (Hering, 1926) (*Pericopis*), **syn. n.**
*postflava* (Hering, 1926) (*Pericopis*), **syn. n.**
*sibylla* (Butler, 1873) (*Pericopis*), **syn. n.**
*unxia* (Druce, 1910) (*Pericopis*), **syn. n.**
*fantasma* (Butler, 1873) (*Pericopis*)
*innominatum* Becker, **sp. n.**
*trapeziata*; (Hering, 1925) (*Pericopis*), [*partim*, male], misid.
*forbesi* (Druce, 1907) (*Pericopis*)
*evanescens* (Hering, 1925 (*Pericopis*), **syn. n.**
*hilarum* (Weymer, 1895) (*Thebrone*)
*biformis* (Schaus, 1901) (*Pericopis*), **syn. n.**
*hilarina* (Weymer, 1914) (*Thebrone*), **syn. n.**
*hilarina* f. *fulva* (Weymer, 1914) (*Thebrone*), **syn. n.**
*intermedium* Becker, **sp. n.**
*leda* (Druce, 1884) (*Pericopis*)
*paracelsus* (Hering, 1926) (*Pericopis*), **syn. n.**
*luctuosum* (Dognin, 1919) (*Pericopis*)
*aethiops* (Hering, 1928) (*Pericopis*), **syn. n.**
*lygdamis* (Druce, 1884) (*Pericopis*), **stat. rev**
*fortis* (Schaus, 1910) (*Pericopis*), **syn. n.**
*marginalis* f. *tibesina* (Hering, 1930) (*Pericopis*), **syn. n.**
*ultima* (Hering, 1926) (*Pericopis*), **syn. n.**
*viduopsis* (Hering, 1926) (*Pericopis*), **syn. n.**
*mariamne* (Geyer, [1838]) (*Eucharia*), **stat. rev.**
*fenestrata* (Butler, 1872) (*Pericopis*), **syn. n.**
*minor* Becker, **sp. n.**
*perplexum* (Schaus, 1910) (*Pericopis*)
*guapa* (Schaus, 1910) (*Pericopis*), **syn. n.**
*pictum* (Guérin-Méneville, [1844]) (*Callimorpha*)
*indecisa* (Walker, 1854) (*Pericopis*), **syn. rev.**
*lucifer* (Butler, 1873) (*Pericopis*), **syn. rev.**
*subapicalis* (Walker, 1854) (*Pericopis*)
*pagasa* (Dognin, 1919) (*Pericopis*), **syn. n.**
*thetis* (Klug, 1836) (*Euprepia*)
*howardi* (Edwards, 1887) (*Daritis*), **syn. n.**
*thyridinum* (Butler, 1871) (*Pericopis*)
*damon* (Druce, 1910) (*Pericopis*), **syn. n.**
*grassator* (Hering, 1925) *Pericopis*), **syn. n.**
*mosera* (Druce, 1907) (*Pericopis*), **syn. n.**
*sylvia* (Druce, 1910) (*Pericopis*), **syn. n.**
*talboti* (Dognin, 1922) (Pericopis), **syn. n.**
*viuda* (Schaus, 1910) (*Pericopis*)
*joiceyi* (Dognin, 1923) (*Centronia*), **syn. n.**
*Hypocrita* Hübner, 1807
*celina* (Boisduval, 1870) (*Calepidos*)
*escuintla* (Schaus, 1920) (*Eucyane*), **syn. n.**
*Josiomorpha* Felder, 1874
*cathetozosta* Becker, **sp. n.**
*triangulifera* Hering, 1925, **stat. rev.**
*Phaloe* Guérin-Méneville, [1838]
*Sphaeromachia* Grote, 1877, **syn. rev.**
*cubana* (Herrich-Schäffer, 1876) (*Pericopis*), **comb. rev.**
*gaumeri* (Druce, 1884) (*Phaloe*), **syn. n.**
*Phaloesia* Walker, 1854
*saucia* Walker, 1854
*fulvicolis* Butler, 1876, **syn. rev.**
*flaviventris* Reich, 1938, **syn. n.**
*Pseudophaloe* Hering, 1925
*ninonia* (Druce, 1884) (*Eucyane*)
*cotta* (Druce, 1897) (*Pericopis*), **syn. n.**
*levisi* (Schaus, 1910) (*Phaloe*), **syn. n.**
*promiscua* Becker, **sp. n.**
*schausi* (Edwards, 1884) (*Pericopis*)
*verania* (Druce, 1884) (*Phaloe*), **syn. n.**
*veranioides* Hering, 1925, **syn. n.**
*Sermyla* Walker, 1854
*transversa* Walker, 1854
*morta* Schaus, 1892, **syn. n.**

## Taxonomy

### Ctenuchina

*Agyrta dux* (Walker)

*Dioptis dux* Walker, 1854: 327. Holotype ♀, VENEZUELA: [no further data] (BMNH) [not examined].

*Isostola superba* Druce, 1885: 115. Holotype ♂, GUATEMALA: Verapaz, Teleman (*Champion*) (BMNH) [not examined]. **Syn. rev.**

Remarks. *I. superba* is a Ctenuchina that Hampson (1898: 470, fig. 257) had already synonymized with *A. dux*, along with *A. aestiva* Butler, and *A. phyla* Druce, a treatment followed by Draudt (1915: 162, pl. 24a). The figures presented by both Hampson and Draudt match the excellent colour illustration of *superba* in Druce (1884: pl. 12, fig. 5). Both Hering (1925: 434) and Watson & Goodger (1986: 34) overlooked this synonymy and included *I. superba* again in the Pericopinae.

*Coreura phoenicides* (Druce), **comb. n.**

*Eucyane phoenicides* Druce, 1884: 105. Holotype ♂, GUATEMALA: Coban (MNHU) [not examined].

Remarks. The illustration in Druce (1884: pl. 10, fig. 15), clearly shows that this species is closely related to other species in this Ctenuchina genus, such as *C. fida* (Hübner), *C. lysimachides* Druce, and *C. albicosta* Draudt, and very likely the last is a synonym of it. The name *E. phoenicides* was overlooked in all major works subsequent to Kirby (1892: 189).

### Pericopina

*Calodesma maculifrons* (Walker)

*Stenele maculifrons* Walker, [1865]: 157. Holotype ♂, [HONDURAS]: Limas (BMNH) [examined].

*Cocastra melanchroia* Boisduval, 1870: 88. Holotype ♀, GUATEMALA: [No further data] (BMNH) [image examined]. **Syn. n.**

Remarks. A strongly dimorphic species with males having yellow or orange ground colour [*maculifrons*], whereas females have it black [*melanchroia*]. Several specimens were reared on several species of Malpighiaceae in Costa Rica (Janzen & Hallwachs, 2013), making possible the association of sexes. This is another example of the importance of rearing adults from immatures in order to clarify such questions.

***Chetone zuleika*** Becker & Goodger, **sp. n.**

*Pericopis ithomia*; Hering, 1925: 438 (partim), pl. 62a.

**Diagnosis**. Very similar to *C. ithomia* (Boisduval), and often found mixed with this in the collections. In *C. ithomia* the dots on thorax are small and white, and the series of yellow marks that form the first oblique fascia across of forewings starts before the middle of costa, as illustrated in Felder (1874: pl. 103, fig. 7), whereas in *C. zuleika* the dots on thorax are orange and larger, and the marks that composes the first fascia starts about half way of costa, as illustrated in Hering (1925, pl. 62a). Also the black margin of hind wings, in *C. ithomia* is broader, with internal edge irregular, whereas in *C. zuleika* it is narrower, with the internal edge more regular.

**Material studied** (10 ♂♂, 9 ♀♀). Holotype ♀, PANAMA: Taboga Is., 10.vi.1911 (*Busck*) (USNM). Paratypes: ♂ PANAMA: Bugaba [no further data]; ♂, Panama (Bro. *Regis* Col.) [no further data]; ♂, C[anal] Z[one], La Pita, 13.xi.1963 (*Small*); ♀, C[anal] Z[one], Cocoli, 27.vi.1963 [(*Small*)]; ♀, Panama, El Llano, Cordillera de San Blas, 330 m, vi.1978 (*Small*); ♀, Veraguas, Santa Fe, 230 m, 20.ix.1975 (*Small*); ♂, [no data] (ex *Schaus* Col); ♂, "775" [no further data] (ex *Schaus* Col.); ♂, "605" [no further data] (ex *Schaus* Col.); ♀, "605" [no further data] (ex *Schaus* Col.) (USNM); ♀, [?]: [No data] (CMNH); 2 ♂♂, 2 ♀♀, Chiriqui [no further data] (ex *Staudinger* Col., ex *Rothschild* Col.) (BMNH); ♂, COLOMBIA: [No further data] (BMNH); ♂, BRAZIL: [No further data] [mislabeled?] (BMNH); ♀, [No data]: "156 *Rothschild* Bequest BM 1939-1" (BMNH).

**Etymology.** Name of women; after *Heliconius hecale zuleika* Hewitson, one of its mimics.

Remarks. This and *C. ithomia* are perfect mimics of the butterflies *Heliconius hecale zuleika* Hewitson, *Tithorea tarricina pinthias* Godman & Salvin, and *Eueides procula vulgiformis* Butler & Druce (Nymphalidae), and of *Papilio ascolius zalates* Godman & Salvin (Papilionidae).

*Dysschema amphissum* (Geyer)

*Episteme amphissa* Geyer, 1832: 35. Type (s) ♀, BRAZIL: [No further data] [lost].

*Coborisa fenestrata* Walker, 1855: 915. Lectotype ♂, [BRAZIL: RJ] 'Mexico ?' (BMNH), here designated [image examined]. **Syn. n.**

*Pericopis vestalis* Butler, 1871: 289. Holotype ♂, BRAZIL: [RJ] [No further data] (UMO) [image examined]. **Syn. rev.**

Remarks. The two male syntypes of *C. fenestrata* are descaled, mislabeled specimens. The specimen bearing the following labels is here selected as the lectotype: round, red edged 'Type'; round, blue edged 'Syntype'; long, white, printed '1. Coborisa fenestrata'; round, white '43, 58'; the second bearing the following labels, is designated as paralectotype: round, blue edged 'Syntype'; round, white '43, 58', long, white, typed 'fenestrata Walker.' The species is known only from Southeastern Brazil. In VOB there is a large series of specimens ranging from Southern Minas Gerais and Rio de Janeiro, south to Rio Grande do Sul. The males show some variation both in the shape of the forewings and in the intensity of scaling. Some individuals have slightly narrow, more pointed forewings, matching the syntypes of *fenestrata* and the holotype of *vestalis*, whereas others have them more

rounded, with margins and two oblique, faint gray bands from costa to dorsum and termen respectively, as shown in Hering (1925: pl. 64b). The last had been synonymized under *amphissa* (Hering, 1925: 443), but listed as valid species by Watson & Goodger (1986: 38). The male genitalia of all forms are identical. As with other species of the genus, males are commonly attracted to light, whereas the females are diurnal, resembling nymphalid and papilionid butterflies. In the case of *D. amphissum* females mimic *Actinote* species. In the author's personal copy of Seitz's work, purchased from the heirs of J. Zikán, there is a pencil note, in his handwriting, next to *P. fenestrata,* stating: 'F.[azenda] d.[os] C.[ampos]' ♂, ♀, r.[eared] on assa-peixe [*Vernonia* sp., Asteraceae]. According to O. Mielke (pers. comm.) this place is located in Virginia, state of Minas Gerais, next to the border with Rio de Janeiro.

*Dysschema arema* (Boisduval)

*Tebrone arema* Boisduval, 1870: 85. Holotype ♂, COLOMBIA: [No further data] (BMNH) [image examined].

*Pericopis imitata* Druce, 1910: 170. Holotype ♂, PERU: Limbani, Carabaya, v.1904 (*Ockenden*) (BMNH) [image examined]. **Syn. n.**

*Pericopis titan* Druce, 1910: 170. Holotype ♀, PERU: Chanchamayo (*Watkins*) (BMNH) [image examined]. **Syn. n.**

Remarks. The males show some variation in pattern, especially in the hind wings. Some specimens have the external band reaching the cell, as in the type of *arema;* others have a band beyond the cell, followed by pair of light dots as in *imitata* and *titan.* The author collected a series in Ecuador that represents both forms.

*Dysschema boisduvalii* (Hoeven)
Figs. 1-3

*Glaucopis boisduvalii* Hoeven, 1840: 279. Syntype ? ♂, BRAZIL [no further data] (BMNH) [image examined].

*Arctia funeralis* Herrich-Schäffer, [1856]: pl. 92, fig. 527. Syntype? ♂, [no further data] [S. America] (BMNH) [image examined]. Synonymized by Herrch-Schäffer [1858]: 84.

*Pericopis principalis* Jörgensen, 1935: 119. Holotype ♀, PARAGUAY: Trinidad (*Schade*) [lost]. **Syn. n.**

*Pericopis regalis* Jörgensen, 1935: 117, pl. 4, fig. 27. Holotype ♀, ARGENTINA: "Guaycoléc. Territorio de Formosa" (*Jörgensen*) [MACN] [not examined]. **Syn. n.**

*Pericopis rubripicta* Butler, 1872a: 50. Holotype ♀, [COLOMBIA]: Bogota (UMO) [image examined]. **Syn. n.**

*Daritis trapeziata* Walker, 1865: 281. Holotype ♀, "In Mr Norris's collection" [no further data] [South America] [lost]. **Syn. n.**

*Mazaeras woodii* Butler, 1867: 218, pl. 4, figs. 2, 3. Holotype ♀, [BRAZIL]: Bahia (Col. Wood) [lost]. **Syn. n.**

*Pericopis trapeziata;* Hering, 1925: 427, pl. 60c [*partim,* female].

Remarks. A series of males and females (VOB 56051) was reared by the author from a single brood of caterpillars found feeding on leaves of *Vernonia* sp. (Asteraceae).

The sexes are strongly dimorphic. Males, described twice, are white with four blackish dots on forewings (Fig. 2), matching the illustrations of *A. funeralis* in Herrich-Schäffer, and of *boisduvalii* in Hering (1925: pl. 60c), as well as specimens labeled '*Glaucopis Boisduvalii* Van der Hoeven" 'Syntype?' and '*Arctia funeralis* Herr. S. Brèsil' 'Syntype?' in the BMNH. Both specimens bear a round, blue edged labels 'Syntype', with question marks. For this reason and by the fact that other specimens might be found in other collections, no lectotype designations are proposed. The females, described five times, are mostly blackish with the dots on abdomen reduced (Figs. 1, 3), matching the original descriptions of *trapeziata* and *woodii* and the descriptions, illustration and the type material of *rubripicta, regalis* and *principalis.* Hering (1925: 427, pl. 60c) correctly synonymized *rubripicta* and *woodii* under *trapeziata* but wrongly associated it to the males of an unnamed species from Southern Brazil (see *innominatum* below). The figure of the type of *regalis* in Jörgensen (1935: pl. 4, fig. 27) leaves no doubt that it is a female of *boisduvalii,* and the original description of his *principalis* matches a form with reduced pattern, also represented in the series reared by the author. According to him (Jörgensen 1935: 119): "(Como el ejemplar típico [of *principalis*] ha desaparecido, la descripción anterior incompleta está hecha según la acuarela del señor Schade)." The types of both *D. trapeziata* and *M. woodii,* supposedly in the BMNH or UMO, were not traced. In the BMNH there are manuscript notes by G. Hampson stating that the specimens belonging to both Norris and Wood collections were returned to the owners and are presumably lost.

*Dysschema centenarium* (Burmeister)
Figs. 5, 6, 17

*Eucharia centenaria* Burmeister, 1879: 436. Type ♂, ARGENTINA: [not examined].

*Pericopis jaonis* Strand, 1911: 77; 1914: 9, pl. 4, fig. 20; Hering, 1925: 428, pl. 60g. Holotype ♀, BRAZIL: [RS?], São João (BMNH) [image examined]. **Syn. rev.**

Remarks. *D. centenarium* ranges from Argentina and Uruguay to southern Rio Grande do Sul State, and has been reared several times on the leaves of *Eryngium paniculatum* (Apiaceae) in Uruguay (Achaval 1968: 102), and on *E. eburneum* in Argentina (Jörgensen 1935: 117). One of the females obtained from such rearings is in VOB (presented by the late Prof. Biezanko). This female matches exactly the type of *jaonis,* a name that had already been synonymized under *centenaria* by Jörgensen (1935: 117), an action overlooked by Watson & Goodger (1986: 38), who listed them as different species.

*Dysschema eurocilia* (Cramer)

*Phalaena eurocilia* Cramer, 1777: 148, pl. 178, C. Type(s) ♀, [SURINAM]: "Antilles", no further data [not examined] [lost?].
*Pericopis anadema* Druce, 1907: 300. Holotype ♂, COLOMBIA: Minca, 2000 ft. (*Smith*) [image examined]. **Syn. n.**
*Chetone aorsa* Boisduval, 1870: 90. Holotype ♀, GUATEMALA: [No further data] (BMNH) [image examined]. **Syn. n.**
*Pericopis bivittata* Walker, 1854: 348. Holotype ♀, VENEZUELA: [No further data] (BMNH) [image examined]. **Syn. n.**
*Pericopis daphne* Druce, 1885: 113. Holotype ♀, PANAMA: San Juan (*Ribbe*) (MNHU) [image examined]. **Syn. n.**
*Pericopis disjuncta* Walker, 1856: 1655. Holotype ♀, COLOMBIA: [No further data] (UMO) [image examined]. **Syn. n.**
*Pericopis flavimedia* Monte, 1933: 30. Lectotype ♀, [BRAZIL: MG, Belo Horizonte] (*Monte*) (IBSP), here designated [not examined]. **Syn. n.**
*Pericopis fulgorata* Butler, 1871: 287. Holotype ♀, [BRAZIL]: PA, Belém, 'Para' (UMO) [image examined]. **Syn. n.**
*Pericopis heliconissa* Strand, 1921: 126. Holotype ♀, PERU. Synonymized by Lamas & Grados, 1986: 25.
*Pericopis hodeva* Druce, 1910: 173. Holotype ♀, PERU: [Pasco], Pozuzo (BMNH) [image examined]. Synonymized by Lamas & Grados, 1996: 25.
*Dysschema hypoxantha* Hübner, 1818: 31, pl. [34], figs. 191, 192. Type ♂, SURINAM: [No further data] [lost?]. **Syn. n.**
*Pericopis leonina* Butler, 1872b: 89. Holotype ♀, COSTA RICA: [No further data] (BMNH) [image examined]. **Syn. n.**
*Sericaria leptoptera* Perty, [1833]: 160. Type ♀, [BRAZIL: PA] ['Amazonum flumen'] [lost?]. **Syn. n.**
*Pericopis lucretia* Butler, 1876a: 340. Holotype ♀, [COLOMBIA: Cundinamarca], Veragua '75-28' (BMNH) [image examined]. Synonymized by Hering, 1925: 442.
*Pericopis eurocilia* f. *melaina* Hering, 1925: 443. Holotype ♀, VENEZUELA: Tachira (*Briceño*) (BMNH) [image examined].
*Pericopis molesta* Hering, 1925: 443. Holotype ♂, COLOMBIA: Popayan, 1895 (*Kalbreyer*) (MNHU) [image examined]. **Syn. n.**
*Pericopis nigrivenata* Hering, 1925: 439. Holotype ♂, ECUADOR: Los Llanos, 1400 m (MNHU) [image examined]. **Syn. n.**
*Pericopis eurocilia* f. *obscurata* Hering, 1925: 443. Holotype ♀, PERU: Chanchamayo (*Thamm*) (MNHU) [image examined].
*Pericopis parviflava* Hering, 1926: 132. Holotype ♂, ECUADOR: [No further data] [image examined]. **Syn. n.**
*Pericopis postflava* Hering, 1926: 132. Holotype ♂, COLOMBIA: Villavicencio (*Fassl*) (MNHU) [image examined]. **Syn. n.**
*Pericopis recta* Hering, 1925: 442. Holotype ♀, COLOMBIA: Cauca (*Patiño*) (MNHU) [image examined]. **Syn. n.**
*Pericopis rhea* Druce, 1910: 174. Holotype ♀, PERU: [No further data] (BMNH) [image examined]. Synonymized by Lamas & Grados, 1996: 25.
*Pericopis irene* f. *splendidissima* Hering, 1925: 443. Holotype ♀, PERU: [Puno], Santo Domingo, Carabaya, 6000 ft, vi.1901 (*Ockenden*) (BMNH) [image examined]. Synonymized by Lamas & Grados, 1996: 25.
*Pericopis staudingeri* Druce, 1910: 174. Holotype ♀, PERU: Cuzco (BMNH) [image examined]. Synonymized by Watson & Goodger, 1986: 38.
*Pericopis sibylla* Butler, 1873: 127. Holotype ♂, [BRAZIL: ES], 'Esp. San.', [No further data], (UMO) [image examined]. **Syn. n.**
*Pericopis umbra* Druce, 1885: 113. Holotype ♀, [EL] SALVADOR: S. Salvador (MNHU) [image examined]. **Syn. n.**
*Pericopis unxia* Druce, 1910: 175. Holotype ♂, PERU: [Puno], La Union, Rio Huacamayo, Carabaya, 2000 ft, xi, xii.1904 (*Ockenden*) (BMNH) [image examined]. **Syn. n.**
*Phalaena zerbina* Stoll, 1790: 184. Type(s) ♀, SURINAM: [No further data] [not examined] [lost?]. Synonymized by Hering, 1925: 423.

Remarks. This is a common species throughout Tropical America and highly variable, especially the females of which two specimens that looks exactly alike are rarely found. As can be seen above, most of the names have been regarded as forms or subspecies of either *eurocilia* or *hypoxantha*. However, as the species has continuous distribution and the different forms are connected to each other by intermediate forms, they cannot be considered as subspecies. The figure of *S. leptoptera* in Perty ([1833]: pl. 32, fig. 3) clearly indicates that the specimen he described is the female of form *hypoxantha*. The type material of *P. melini* Bryk, 1953, were not examined, however, it has also been synonymized with *D. hypoxantha* (Watson & Goodger, 1986: 38). *P. flavimedia* was synonymized with *D. hypoxantha* by Lima (1936: 258), following a personal communication by Travassos, a concept followed by subsequent authors (Silva *et al.*, 1968; Mielke & Casagrande, 1999), but apparently overlooked by Watson & Goodger, 1986), who maintained it as a valid species. According to the original description and the excellent figure of the lectotype in Mielke & Casagrande (1999: 229, fig. 5), there is no doubt that this is another junior synonym of *D. eurocilia*. Monte, in the original description, was correct to point out that *flavimedia* is closely related to *D. irene* (Druce), also one of the synonyms of *D. eurocilia* (Lamas & Grados, 1996). Mielke & Casagrande (1999: 229) wrongly stated that the specimen in the IBSP is the holotype. According to the original description, Monte stated that he kept at least five of the specimens reared from caterpillars, feeding on the leaves of *Vernonia* sp. (Asteraceae), and Lima (1936: 258) mentioned that he was informed by Travassos that one "cotype" was in the old Instituto de Biologia Vegetal, Rio de Janeiro. The specimen studied by Mielke & Casagrande is here designated as the lectotype. A. Aiello provided a photograph of a male, which matches the type of *molesta*, reared on *Lepidaploa canescens* (Asteraceae), in Panama. Watson & Goodger (1986: 37) wrongly cited '[C. America]' as the type locality of *P. lucretia*.

*Dysschema fantasma* (Butler)
Fig. 12

*Pericopis fantasma* Butler, 1873: 126. Lectotype ♂, [BRAZIL] 'Colombia': No further data (UMO), here designated [image examined].

Remarks. The type-locality seems incorrect as all specimens deposited in the BMNH, USNM, CMNH, and in VOB, came from Southeastern Brazil. There are two males in the UMO, with identical data, labeled

'type.' The specimen bearing a white, rectangular label stating 'Type Lep. 363, 1/2, Pericopis fantasma Butler, HOPE DEPT. OXFORD' is here selected as the lectotype. In Zikán & Zikán (1968: 80), *D. terminata* (Guérin-Méneville) is listed as the female of this though with no justification [reared?] what is possible as both are known by their opposite sexes only. If true the last name has priority.

*Dysschema forbesi* (Druce)

*Pericopis forbesi* Druce, 1907: 301. Holotype ♀, BRAZIL: [SC], Quipapa (*Forbes*) (BMNH) [image examined].

*Pericopis evanescens* Hering, 1925: 440. Holotype ♂, BRAZIL: SP, Casa Branca, 1890 (*Garbe*) (MNHU) [image examined]. **Syn. n.**

Remarks. The colour pattern and distribution indicate that the types represent the opposite sex of the same species.

*Dysschema hilarum* (Weymer)

*Thebrone hilara* Weymer, 1895: 325. Holotype ♀. BRAZIL: RS 'Rio Grande do Sul', (MNHU) [image examined].

*Pericopis biformis* Schaus, 1901: 269. Lectotype ♂, BRAZIL: PR, Castro (USNM), here designated [examined]. **Syn. n.**

*Thebrone hilarina* Weymer, 1914: 7. Type ♀, BRAZIL: [utatele] (BMNH) [image examined]. **Syn. n.**

*Thebrone hilarina* f. *fulva* Weymer, 1914: 7. BRAZIL: [No further data] (MNHU) [not examined]. **Syn. n.**

*Pericopis hilara* f. *mutata* Hering, 1925: 441. BRAZIL: PR, Castro (*Jones*) (BMNH) [image examined].

Remarks. This is a variable species, with the ground colour of hind wings pale yellow to purple, or nearly all brown in the females, as the case in *hilara*'s type specimen and *biformis*' female paralectotype, to almost totally blackish as in the type of *mutata*.

***Dysschema innominatum*** Becker, **sp. n.**
Figs. 4, 8, 15, 16

*Pericopis trapeziata;* Hering, 1925: 427, pl. 60c [*partim*, male], misid.
*Daritis trapeziata;* Zikán & Zikán, 1968: 80, misid.

**Diagnosis.** Very similar to *D. centenarium*, both externally and in the shape of male genitalia. It can be readily distinguished by the pattern of its hind wings: it has a red, black bordered mark outside the end of cell –absent in *centenarium*. The expansion of the sacculus vestigial, about ¼ of that of costa –half the size in *centenarium*.

**Description**. Male forewings 22-25 mm. Head –including palpi and antennae- and thorax black. Patagia and base of tegulae white. Legs black; tarsi with sparse white scales. Wings translucent white; cilia white. Forewings with black pattern as follows: costa, above cell; oblong patch on mid cell; sub triangular patch at end of cell, connected to costa; broad triangle at apex, from distal fourth of costa to mid termen; triangle on termen, above tornus, with vertex half way between $M_3$ and $Cu_1$; dorsum black, finely bordered white, not reaching tornus. Hind wings bordered black with enclosed white dots between cells, bordered red internally; red, bordered black dot at end of cell. Abdomen striped black and white longitudinally.

**Genitalia** ♂. Socii long, branching V-shape, arms slightly incurved distally, covered dorsally with sparse, long setae. Vinculum a narrow belt slightly incurved basally. Juxta H-shaped. Valvae twice as long as broad; tip of sacculus vestigial. Aedoeagus sinuous; basal half oval; distal half tubular, ending in a long, sharp tooth; small, sharp thorn before apex, ventrally.

**Female.** Pattern similar to that of male, but with light areas dusted gray, not white; basal half of hind wings black.

**Material studied** (17 ♂♂, 1 ♀, 2 male genitalia slides). Holotype ♂, BRAZIL: SP, Campos do Jordão, 22°46' S, 45°31' W, 1600 m, 23-27.i.2001 (*Becker*, 131020) (UFPR); paratypes: 3 ♂♂, same data as holotype; 2 ♂♂, RJ: Itatiaia, 2300, 26.i.1993 (*Becker*, 86.494); 4 ♂♂, SC, São Joaquim, 1400 m, 2.ii.1993 (*Becker*, 87601); 2 ♂♂, SC, Urubici, Serra do Panelão, 1300 m, 14-17.ii.2007 (*Moser*); ♂, SC, Curitibanos, 1000 m, 17.ii.2008 (*Moser*); ♀, PR, Serra do Itararé, 1000 m, 7-8.ii.2008 (*C. G. Mielke*), flying at day time; ♂, RS, Garibaldi, 9.iii.1967 (*Becker*, 3817); 4 ♂♂, RS: São José dos Ausentes, 1200 m, 28-31.i.2000 (*Silveira*); 2 ♂♂, São Francisco de Paula, Rio Sta. Cruz, 650 m, 24.i.2006 (*Moser*).

**Etymology**. From the Latin ´innominatus´ = nameless.

Remarks. The species described and illustrated by Hering (1925: 427, pl. 60c) as *trapeziata* had the sexes wrongly associated, belonging to two different species: the female to *boisduvalii* (see above); the male to an undescribed species. The other evidence that does not support Hering's proposal is distribution: *boisduvalii* ranges from southern Brazil and Paraguay up to Bogota, in Colombia; the undescribed, represented by the male, is restricted to Southern Brazil, ranging from Northern Rio Grande do Sul State, to the mountains of Rio de Janeiro.

***Dysschema intermedium*** Becker, **sp. n.**
Fig. 13

**Diagnosis.** Intermediate between *D. magdala* and *D. gaumeri*. In *magdala* the basal half of fore wings is homogeneous gray, with no white mark near thorax, and no white dots along margins; the hind wings have only a trace of a line at the end of cell whereas in *intermedium* this line is strongly developed. *D. gaumeri* has the pattern more reduced and the dark gray band along the hind wing margins is reduced to a series of dots on veins.

**Description**. Male forewings 35 mm. Head and thorax black; tegulae with a broad yellow band frontally. Legs yellow ventrally, tibiae and tarsi black. Wings translucent with irregular dark gray areas dusted ferruginous underneath. Fore wings with a diffuse white streak basally connecting with the yellow band on tegulae; costa dark gray interrupted with diffuse whitish for some extension above end of cell and before apex; basal half of cell dusted gray; broad dark gray mark at end of cell, expanding to costa; termen dark gray with as series of small white dots between veins following margin; dorsum gray below 1A, from base to before tornus. Hind wings with costa gray, dusted reddish; termen with irregular reddish band bordered dark gray, sometimes reduced to irregular reddish dots between veins; series of white dots along margin; internal margin covered with sparse, long, dark gray scales; a broad dark gray band at end of cell. Abdomen red with a wide black band dorsally; yellow ventrally.

**Female** forewings 37-40 mm. Body as in males. Fore wings dark

gray with light areas whitish, dusted gray, instead of translucent. Hind wings orange red; markings similar to those on males.

**Genitalia** ♂. Similar to those of *D.* minor, [see that] but with socii nearly straight and the expansion of dorsal margin longer and thicker. Aedoeagus also more curved.

**Material studied** (8♂♂, 4♀♀, 2♂♂ genitalia slides). Holotype ♂, GUATEMALA: Baja Verapaz, Purulha, 1620 m, 20.vii.2000 (*Becker*) (VOB 123199) (USNM); paratypes: 1 ♂, 1 ♀, same data as holotype; 3 ♂♂, 1 ♀, Quetzaltenango, Aguas Georginas, 2500 m, 12.vii.2000 (*Becker*) (VOB 122887); 1 ♂, San Marcos, San Marcos, 2800 m, 9.vii.2000 (VOB 122767); 1 ♂, 2♀♀, MEXICO: Chia, San Cristóbal de las Casas, 2300 m, 23-27.vii.1981 (*Becker*) (VOB 43634).

**Etymology**. From the Latin 'intermedium' = intermediate.

Remarks. The specimens from San Marcos and Aguas Georginas are slightly smaller; the female has hind wings tinged gray basally.

*Dysschema leda* (Druce)

*Pericopis leda* Druce, 1884: 111, pl. 11, fig. 13. Holotype ♂, COSTA RICA: [Cartago], [Volcan] Irazu, 6-7000 ft (*Rogers*) (BMNH) [image examined].

*Pericopis paracelsus* Hering, 1926: 133. Holotype ♂, COSTA RICA: [Cartago], Vulcan Irazu, 1200m (*Fassl*) (MNHU) [image examined]. **Syn. n.**

Remarks. The large series of specimens examined in the several collections studied, that match the type image, indicates that there is only one species that, as Hering pointed out, is "Äusserlich einer marginalis-Rasse ähnlich, aber Hlb oben schwartz, mit zwei gelblich-grauen Subdorsalstreifen, Analbusch rot." Hering (1925: 442) treated *P. leda* as a form of *P. marginalis*, together with *P. magdala* and its forms. It seems that he had no specimen of *P. leda* at that time as the difference in the colour of abdomen between them is striking: dark gray with two sub dorsal yellowish bands in *P. leda*, but red with a black dorsal line in *P. marginalis-magdala*-group. This perhaps is the reason why he described it again as *P. paracelsus*.

*Dysschema luctuosum* (Dognin)
Figs. 7, 9

*Pericopis luctuosa* Dognin, 1919: 4. Holotype ♂, [BRAZIL] 'PERU': [No further data] (USNM) [examined].

*Pericopis aethiops* Hering, 1928: 270. Holotype ♀, BRAZIL: 'Sūd Brasil.' (MNHU) [image examined]. **Syn. n.**

Remarks. The type-locality of *P. luctuosa:* "Peru," is presumably a mislabeling as all the specimens examined were collected along the southeastern coast of Brazil, from Rio de Janeiro to Santa Catarina and Lamas & Grados (1996: 23) listed the name, stating that no specimen had been collected in Peru. Male hind wings have two forms: melanic and with ground colour white (the male genitalia of both are identical).

*Dysschema lygdamis* (Druce), **stat. rev.**

*Pericopis lygdamis* Druce, 1884: 111. Holotype ♂, COSTA RICA: Irazu, 6-7000 ft (*Rogers*) (BMNH) [examined].

*Pericopis fortis* Schaus, 1910: 208. Holotype, ♂, COSTA RICA: Tuis, vi. 1907 (Schaus) (USNM), here designated [examined]. **Syn. n.**

*Pericopis marginalis* f. *tibesina* Hering, 1930: 517. Holotype ♂, COSTA RICA: [No further data] (*Fassl*) (MNHU) [image examined]. **Syn. n.**

*Pericopis ultima* Hering, 1926: 131. Holotype ♂, PANAMA: Lino (*Fassl*) (MNHU) [image examined]. **Syn. n.**

*Pericopis viduopsis* Hering, 1926: 132. Holotype ♂, PANAMA: Lino (*Fassl*) (MNHU) [image examined]. **Syn. n.**

Remarks. This species is similar to *D. magdala* but can be easily distinguished by the presence of a short yellow dash at base of forewings. In males the hind wings can vary from nearly translucent whitish [as in the types of *lygdamis, fortis* and *tibesina*] to scaled orange [as in the types of *ultima* and *viduopsis*]. In VOB there is a series from Tapanti, Costa Rica, collected on the same sheet at the same night, representing both the extreme as well as intermediate forms. It seems restricted to the mountains of Costa Rica and Panama.

*Dysschema mariamne* (Geyer), **stat. rev.**

*Eucharia mariamne* Geyer, [1838]: pl. [47]. Type [s] ?, MEXICO: [No further data] [lost].

*Pericopis mariamne* f. *fenestrata* Butler, 1872b: 50. Holotype ♂, [GUATEMALA]: San Geronimo (UMO) [image examined]. **Syn. n.**

Remarks. This species has been considered a synonym of *D. thetis* (Hering, 1925: 427, Watson & Goodger, 1986: 38, Lamas & Grados, 1996:25). Two distinct populations are involved here: one, ranging from Southwestern USA and Northwestern Mexico, which has the forewings underside tinged dark gray, known as *D. howardi,* and another, from Eastern Mexico down to Panama, with forewings underside tinged orange, known as *thetis.* However the lectotype of *thetis* belongs to the first population [see *thetis* below], whereas *mariamne* belongs to the second, as clearly shown in the original illustration. Their genitalia show no difference, so it is very likely that both populations belong to one species. However, as they have been regarded as different species (Franclemont, 1984: 114), and further studies are needed to elucidate their status, they are maintained here as distinct. Some confusion is involved with the original illustrations of *mariamne*: as the original plate is not numbered, Watson, Fletcher & Nye (1980: 50) mention 'pl. [46],' and Watson & Goodger (1986: 380) 'pl. [47].' Also, in the facsimile edition by Kirby (1908-1912), the names are transposed: the species illustrated in 'Tafel 485 (47)' as

'*Eucharia Mariamne*' is '*Estigmene lactinea,*' whereas the one illustrated in 'Tafel 486(48)' as '*Estigmene Lactinea,*' is '*Eucharia mariamne.*'

***Dysschema minor*** Becker, **sp. n.**
Fig. 14

**Diagnosis.** The smaller species in the *D. thetis* species-group, resembling *D. zeladon* (Dyar), but easily distinguished by the semitransluscent hind wings, orange in *D. zeladon.*

**Description.** Male forewing 26-28 mm. Head –including labial palpi and antennae-and thorax dark gray; tegulae with a broad yellow band frontally. Wings semitransluscent, veins dark gray. Forewings with basal half smoky gray; costa gray, interrupted smoky at middle and before apex; irregular, subreniform patch at end of cell; termen broadly gray; dorsum, below cell, gray, not reaching tornus; tinged ochreous underside. Hind wings with costa, above cell, ochreous; margins orange; external margin bordered black internally, with series of white dots between veins; internal margin intermixed with long, dark gray scales. Abdomen carmine red dorsally; with dorsal and two lateral black bands; underside yellow.

**Genitalia** male (Fig. 14). Socii long, slender, slightly incurved, tapering to sharp end. Vinculum a narrow, round belt. Juxta diamond shaped. Valvae twice as long as broad; distal half split between dorsal margin and sacculus, ending in two long, slender digital expansions, tapering distad; that of dorsal margin more sclerotized and sharply pointed than that of sacculus. Aedoeagus a nearly straight rod, three times as long as thick; vesica smooth with a single long spine.

**Female** unknown.

**Material studied** (2 ♂♂, 1 genitalia slide). Holotype ♂, MEXICO: Col, Minatitlán, 2100 m, 14.vi.2000 (*Becker*) (VOB 121944) (UNAM); paratype ♂, same data as holotype (VOB).

**Etymology.** From the Latin 'minor' = little.

*Dysschema perplexum* (Schaus)

*Pericopis perplexa* Schaus, 1910: 210. Holotype ♂, COSTA RICA: [Limon], Sixaola Riv., iii.[1909] (*Schaus & Barnes*) (USNM, no. 16912) [examined].

*Pericopis guapa* Schaus, 1910: 210. Holotype ♀, COSTA RICA: [Limon], Guapiles, i.1909 (*Schaus & Barnes*) (USNM, no. 16910) [examined]. **Syn. n.**

Remarks. A highly dimorphic species. Males semitransluscent white with transverse fasciae and veins heavily marked dark gray, similar to the males *D. jansonis.* Females with forewings black crossed by two transverse oblique white bands and with hind wings orange, resembling *Chetone* species, but readily distinguished from these by the dorsal, dark band along the abdomen. The association of male and female was possible through the material reared from eggs and larvae by A. Aiello (pers. inform.), in Panama, and by D. Janzen (pers. inform.), in Costa Rica.

*Dysschema pictum* (Guérin-Méneville)

*Callimorpha picta* Guérin-Méneville, [1844]: 517. Holotype ♀, BRAZIL: SP, Santos [not examined].

*Pericopis capella* Druce, 1899: 233. Holotype ♀, BRAZIL: Ba[hia]? (illegible) (BMNH) [image examined]. Synonymized by Hering, 1925: 444.

*Pericopis indecisa* Walker, 1854: 347. Holotype ♀, [BRAZIL: RJ], Rio [de Janeiro] (BMNH) [image examined]. **Syn. rev.**

*Pericopis lucifer* Butler, 1873: 126. Holotype ♂, [BRAZIL]: ES "Espirito Santo" [no further data] (UMO) [image examined]. **Syn. rev.**

Remarks. The caterpillars of this species were reared on the leaves of *Mikania hirsutissima* and *Senecio brasiliensis* by Spitz (1931) and by Monte (1934), and on *Vernonia polyanthes* (Asteraceae) by Travassos Filho (1947: 483-537, pls. 1-17, figs. 1-65, a-f). The last author gives a detailed description, including colour illustrations of the different forms of the adult females, correctly identifying the males as *P. lucifer* and the females, which show high chromatic variation, as *P. picta* and *P. indecisa,* following the figures in Hering (1935: pl. 63g, 64c). Apparently Watson & Goodger (1986) overlooked this work and listed all the names as valid.

*Dysschema subapicalis* (Walker)

*Pericopis subapicalis* Walker, 1854: 352. Holotype ♀, BRAZIL: [RJ, Rio de Janeiro] (BMNH) [examined].

*Pericopis pagasa* Dognin, 1919: 5. Holotype ♂, BRAZIL: SP, São Paulo (USNM) [examined]. **Syn. n.**

Remarks. This dimorphic species is restricted to the Atlantic forests of Southeastern Brazil. Before the date of Walker's publications, all collections from this region were made around Rio de Janeiro. *P. pagasa* is the fifth junior synonym.

*Dysschema thetis* (Klug)

*Euprepia thetis* Klug, 1836: 6. Lectotype ♂, MEXICO: [No further data] (*Deppe*) (MNHU), here designated [image examined].

*Daritis thetis* var. *howardi* Edwards, 1887: 165. USA: NM [not examined]. **Syn. n.**

Remarks. This and *D. mariamne* have been regarded as synonyms [see *D. mariamne* above], however the lectotype of *thetis* belongs to the same population currently known as *D. howardi.*

*Dysschema thyridinum* (Butler)

*Pericopis thyridina* Butler, 1871: 289. Holotype ♂, ECUADOR: [No further data] (UMO) [image examined].

*Pericopis damon* Druce, 1910: 171. Holotype ♀, PERU: Chanchamayo, 1000-1500 m (*Watkins*) (BMNH) [image examined]. **Syn. n.**

*Pericopis grassator* Hering, 1925: 444. Holotype ♂, [PERU: AM], Puerto Santa Rosa [de Huayabamba], 1894 (*Garleppi*) (MNHU) [image examined]. **Syn. n.**

*Pericopis mosera* Druce, 1907: 301. Holotype ♂, PERU: Rio Colorado, vii,viii.1903 (*Watkins & Tomlinson*) (BMNH) [image examined]. **Syn. n.**

*Pericopis sylvia* Druce, 1910: 172. Holotype ♀, PERU: Chanchamayo, 1000-1500 m (*Watkins*) (BMNH) [image examined]. **Syn. n.**

*Pericopis talboti* Dognin, 1922: 5. Lectotype ♂, COLOMBIA: San Antonio, 1800 m (*Fassl*) (USNM), here designated [examined]. **Syn. n.**

Remarks. The types of both *P. thyridina* and *P. mosera* are almost identical. *P. sylvia* had been already synonymized with *P. mosera* by Watson & Goodger, 1986: 37. In VOB there are two specimens collected in Ecuador, Napo, Misahualli, one has the ground colour translucent whitish, like in *P. thyridina, P. mosera,* and *P. sylvia,* the other with the same areas yellowish, as in *P. grassator, P. talboti* and *P. damon,* as well as a series collected in Ecuador, Tungurahua, Rio Verde which males match the type of *P. talboti* and the female the type of *P. sylvia*. *D. talboti* was described from an unspecified number of specimens from San Antonio (1800 m), Carmen (1600 m) and Tumbo, Cauca, 1000 m (*Fassl*), in Dognin's collection and others in Joyce's collection. Apart from the lectotype mentioned above, there are other four specimens in the USNM, labeled 'cotype,' and four in the BMNH, labeled 'syntype'. These are here designated paralectotypes.

*Dysschema viuda* (Schaus)

*Pericopis viuda* Schaus, 1910: 209. Holotype ♀, COSTA RICA: Tuis, ix.1907 (*Schaus*) (USNM, no. 16911) [examined].

*Centronia joiceyi* Dognin, 1923: 10. Holotype ♀, COLOMBIA: Bogota, 1919 (*Apollinaire-Marie*) (USNM, no. 30544) [examined]. **Syn. n.**

Remarks. This species ranges from Costa Rica to Ecuador. In the author's collection and in the Carnegie Museum there are large series from Costa Rica and Ecuador respectively, representing both sexes, collected at elevations from 500 to 2800m. Hering (1925: 442, pl. 63g) synonymized *Pericopis talboti* Dognin, 1922, under *P. joiceyi*. They are different species, as correctly regarded by Watson & Goodger (1986: 37, 38). The illustrations given by Hering as *P. joiceyi* represent *D. talboti*.

*Hypocrita celina* (Boisduval)

*Calepidos celina* Boisduval, 1870: 89. Holoype ♀, GUATEMALA [no further data] (BMNH) [not examined].

*Eucyane escuintla* Schaus, 1920: 128. Holotype ♂, GUATEMALA: Escuintla, v. (*Schaus & Barnes*) (USNM, no. 22450) [examined]. **Syn. n.**

Remarks. The type specimen of *E. escuintla* matches exactly the figure of the type of *C. celina* in Watson & Goodger (1986, pl. 1, fig. 13). These authors also synonymized *E. pylotoides* Hering, 1925, with this.

***Josiomorpha cathetozosta*** Becker, **sp. n.**
Fig. 19

**Diagnosis**. Same size and colour as *J. penetrata* and *triangulifera,* the other two species in the genus; easily distinguished by the elongate, yellow patch before apex, perpendicular to costa.

**Description**. Male forewing 22 mm. Head –including palpi and antennae- and thorax black; frons with mixed white scales. Base of tegulae with two small, white dots. Coxae yellow ventrally, tibiae and tarsi black, lined white. Forewings black; broad, yellow fascia from base of costa, across cell, following $Cu_2$ half way, slightly incurved distally; elongate, transverse yellow patch before apex, from below costa to before mid termen. Hind wings yellow; broad black margin from apex to $M_3$, expanding inwards towards anal margin. Abdomen black, yellow laterally.

**Genitalia** ♂. Uncus triangular, tip bent ventrad in right angle, sharp distally. Saccus as long as valvae, tapering distad to a sharp end. Juxta rectangular. Membrane between aedoeagus and anus scobinate. Valva straight, twice as long as broad, tapering distad; covered with sparse setae ventrally.

**Female** unknown.

**Material examined** (2 ♂♂, 1 ♂ genitalia). Holotype ♂, GUATEMALA: Quetzaltenango, Aguas Georginas, 2500 m, 12.vii.2000 (*Becker*) (VOB, 122897). Paratype ♂, same data as holotype, genitalia slide VOB 1775 (VOB)

**Etymology.** From the Greek 'cathetos' = perpendicular + 'zoster' = belt.

*Josiomorpha triangulifera* Hering, **sp. rev.**

*Josiomorpha triangulifera* Hering, 1925: 432. Holotype ♀, PANAMA: Chiriqui (MNHU) [not examined).

Remarks. This and *J. penetrata* (Walker) are very similar, however, the last has the fascia along forewings broader and the abdomen wholly white below, whereas in *J. triangulifera* the abdomen is white but, as pointed by Hering (1925: 432), "... on each segment the white colour narrows towards the front, so that a row of white triangles is produced." Also, both are allopatric. All specimens examined were collected in Costa Rica and Panama, whereas the long series of *J. penetrata* came from Southern Mexico and Guatemala. Genitalia are also slightly distinct. Both were synonymized by Watson & Goodger (1986: 37).

*Josiomorphoides gigantea* (Druce)
Fig. 21

*Josia gigantea* Druce, 1897: 406. Holotype ♀, PANAMA: Volcan de Chiriqui (*Troetsch*) (MNHU) [not examined].

*Josiomorpha flammata* Dognin, 1909: 223. Lectotype ♂, COLOMBIA: Villa Elvira, 1.vii.1908 (*Fassl*) (USNM, no. 30548), genitalia slide USNM 93110, here designated [examined]. Synonymized by Hering, 1925: 434.

Remarks. This species is very similar to the following, differing by the yellow, dorsal band along the abdomen and in the shape of genitalia [see below]. A female from Costa Rica, in USNM, matches the figure

in Druce (1897: pl. 78, fig. 25), and a male in VOB, also from Costa Rica, matches the type of *J. flammata.*

*Josiomorphoides dognini* Hering
Fig. 20

*Josiomorpha flammata* "male var., cotype" Dognin, 1909: 223.
*Josiomorphoides dognini* Hering, 1925: 434. Holotype ♂, COLOMBIA: Cali (USNM), genitalia slide USNM 93111 [examined].
*Josiomophoides* sp. ? *gigantea*; Watson & Goodge, 1986: pl. 4, fig. 65.

Remarks. Dognin (1909: 223) described *J. flammata* [=*gigantea,* above] based on three specimens, a pair whose abdomen have a yellow band along dorsum, from Colombia, Villa Elvira, and a male, with its abdomen black dorsally, from Colombia, Cali, which he called "*J. flammata,* male var. cotype." This specimen was named *J. dognini* by Hering (1925: 434). The male genitalia of the types of both forms, illustrated here for the first time, are slightly distinct, especially in the shape of valvae.

*Phaloe* Guérin-Méneville

*Phaloe* Guérin-Méneville, [1838]: 283. Type-species: *Pericopis cruenta* Hübner, 1823: 24, by monotypy.
*Sphaeromachia* Grote, 1867: 304. Type-species: *Pericopis cubana* Herrich-Schäffer, 1866:131, by monotypy. **Syn. rev.**

Remarks. *Sphaeromachia* was treated as a subgenus of *Phaloe* by Hering (1925: 447) and reinstated as genus by Watson & Goodger (1986: 35). The similarity of male genitalia and the presence of red marks between veins at the base of fore wing costa of the type-species of both generic names indicate that they are congeneric.

*Phaloe cubana* (Herrich-Schäffer), **comb. rev.**

*Pericopis cubana* Herrich-Schäffer, 1866: 131. Lectotype ♂, CUBA: [no further data] (*Gundlach*) (MNHU), here designated [image examined].
*Phaloe gaumeri* Druce, 1884: 107. Lectotype ♂, MEXICO: Yuc, Valladolid (*Gaumer*) (BMNH), here designated [examined]. **Syn. n.**

Remarks. In VOB there is a series of specimens from Mexico: Campeche, Escárcega -one of them compared with the type series of *gaumeri*- and from Cuba. Their characters, including genitalia, are identical. There is a male and a female syntypes of *P. cubana* in the MNHU bearing identical labels: red, rectangular 'Type'; violet, square 'Origin'; white, rectangular 'Coll. H.-Sch.'; white, rectangular 'Coll. Staudinger'; white, rectangular 'Cubana H.S., =Gaumeri Druce.' The male specimen is here designated as lectotype, the female as paralectotype There are two males and one female syntypes of *gaumeri* in the BMNH, all bearing labels as above, the male bearing a round red 'type' label is here designated lectotype, the others paralectotypes. The sexes are dimorphic, as illustrated in Hering (1925: pl. 64f) and in Watson & Goodger (1986: pl. 2, figs. 34, 35).

*Phaloesia saucia* Walker

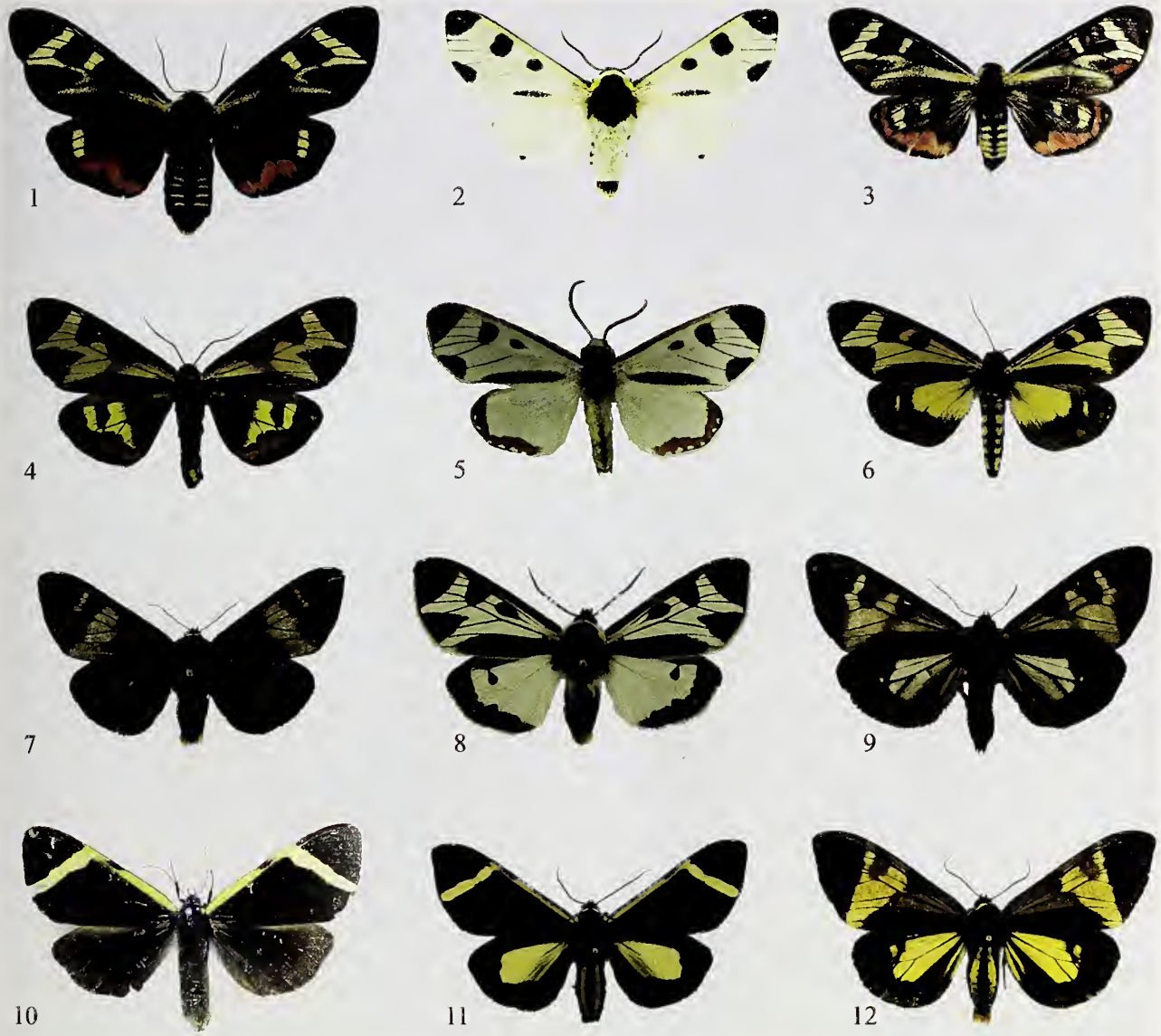
*Phaloesia saucia* Walker, 1854: 359. Holotype ♀, GUATEMALA [no further data] (BMNH) [not examined]
*Phaloesia fulvicollis* Butler, 1876: 171. Holotype ♀, [COLOMBIA]: Sta. Marta (BMNH) [not examined]. **Syn. rev.**
*Phaloesia flaviventris* Reich, 1938: 207. Type(s) ♂, VENEZUELA. [not examined]. **Syn. n.**

Remarks. *P. fulvicollis* had already been synonymized with *P. saucia* by Kirby (1892), followed by Hering (1925: 448, pl. 65a). It is wrongly listed as a synonym of *Gnophaela aequinoctialis* Walker, 1854 in Watson & Goodger (1986: 34), due to a misplacement in the file card at the BMNH (D. Goodger, pers. inform.). The type material of *P. flaviventris* was examined by A. Watson, and in the BMNH there is a note by him stating "absence of white spot in forewing cell, form of *saucia*" (D. Goodger, pers. inform.). In the series examined there are specimens with the white spot on forewing cell reduced or absent, as illustrated in Watson & Goodger (1986: pl.2, fig. 26), as well as with abdomen either yellow or black ventrally.

*Pseudophaloe ninonia* (Druce)

*Eucyane ninonia* Druce, 1884: 104, pl. 10, fig. 13. Holotype ♀, PANAMA: Volcan de Chiriqui (Mus. Staudinger) (MNHU) [not examined].
*Pericopis cotta* Druce, 1897: 385. Holotype ♂, PANAMA: Chiriqui (*Troetsch*) (Mus. Staudinger) (MNHU) [not examined]. **Syn. n.**
*Phaloe levisi* Schaus, 1910: 210. Lectotype ♂, COSTA RICA: [Cartago], Juan Viñas, vi.1909 (*Schaus*) (USNM, no. 16913), here designated [examined]. **Syn. n.**

Remarks. The illustrations of both types described by Druce allow recognition of the species. The ground colour of this species can be either whitish or yellow. Specimens of the two forms collected in Costa Rica by the author, at the same place and at the same time, have identical genitalia. The type of *P. ninonia* belongs to the white form, whereas the types of *P. cotta* and *P. levisi* belong to the yellow form. There is a specimen, from Costa Rica, El Sitio, v.1909, labeled by Schaus as "*Phaloe levisi* type female", which is here designated as paralectotype.




**Figures 1-12**: Adults of *Dysschema* and *Sermyla*. **1–3** *D. boisduvalii*: **(1)** female, **(2)** male, **(3)** female f. *rubripicta*; **4, 8** *D. innominatum*: **(4)** female paratype, **(8)** male holotype; **5,6** *D. centenarium*: **(5)** male, **(6)** female; **7, 9** *D. luctuosum*: **(7)** male f. typica, **(9)** male with ground colour of hind wings white; **10, 11** *S. transversa*: **(10)** female holotype of *morta*, **(11)** male; **(12)** *D. fantasma*.

## *Pseudophaloe promiscua* Becker & Espinosa, **sp. n.**
Fig. 18

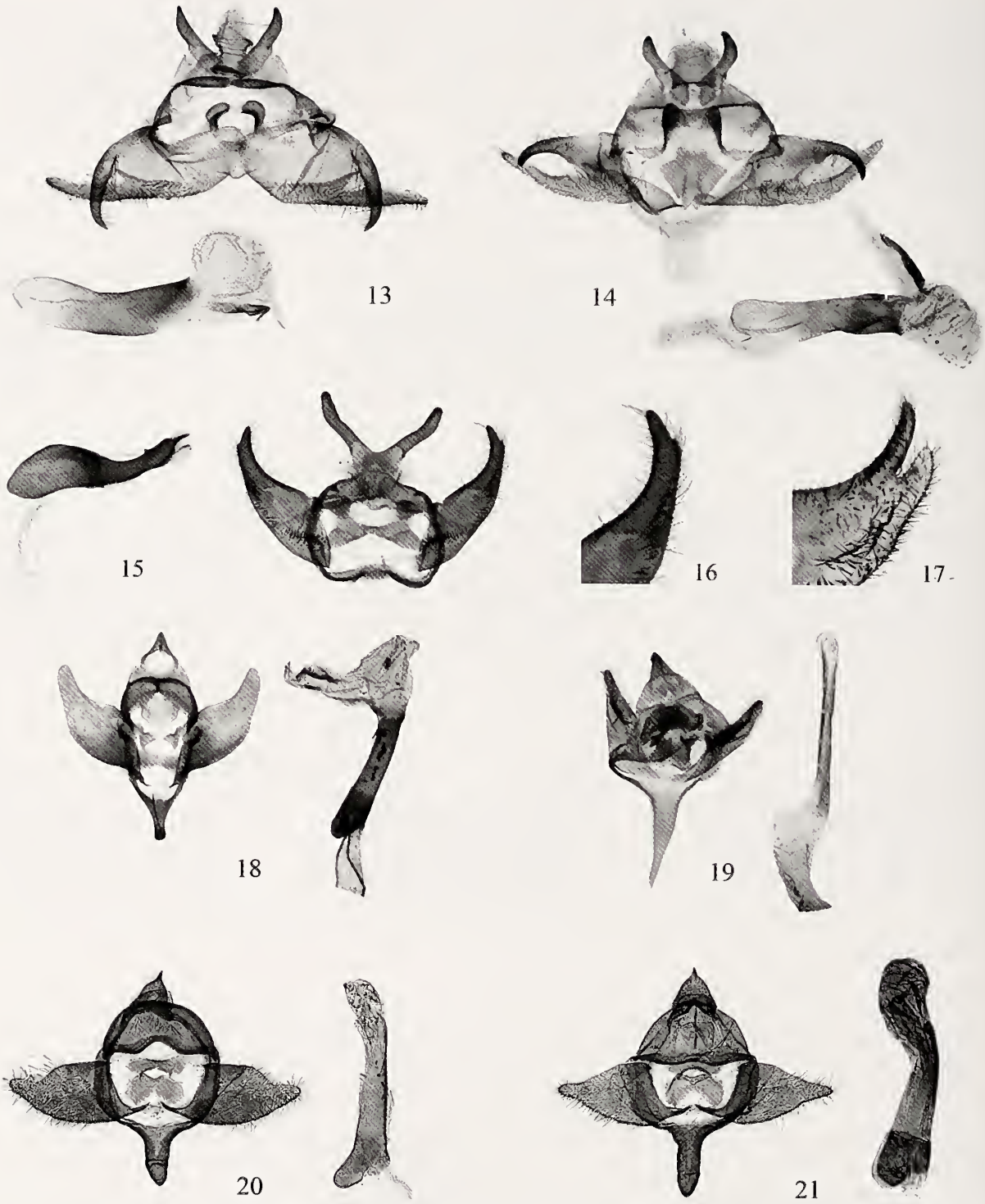
**Diagnosis.** It resembles *P. helotes* but easily distinguished by the iridescent blue tint on hind wings and absence of red at the tip of abdomen.

**Description.** Male forewings 23 mm. Head –including labial palpi and antennae- black; labial palpi with white line ventrally; frons with four white dots: two laterally and one under each scape. Thorax black; pair of white dots anteriorly and trace of white line along dorsum; patagia with pair of red dots each; tegulae with small white dot anteriorly. Legs black, lined white ventrally. Forewings opaque black; small red dot at base of costa; median, oblique, yellow fascia from below costa, across cell, to before tornus; trace of narrow fascia before apex. Hind wings black with iridescent blue reflex. Abdomen black, tinged blue dorsally, whitish ventrally.

**Genitalia** ♂. Uncus a short triangle, tapering distad to a sharp tip. Sacculus half as long as valva. Juxta a narrow, transverse band. Valvae twice as long as broad, distal half tapering towards round tip. Aedoeagus a straight rod, four times as long as thick; vesica smooth.

**Females** unknown.

**Material studied** (10 ♂♂, 1 ♂ genitalia slide). Holotype ♂, COSTA RICA: Limón, Res. Biol. Hitoy Cerere, 9°67'73"N-83°06'13"W, 600 m, 15.v.1999 (*Barton*) (INBio). Paratypes: 6 ♂♂, same locality as holotype, 200-770 m, i.ix.1990, 1.vii.1991, 15.v.1999, 12.vi.1999, 2.vii.2003, (*Barton, Carballo & Barrelier*); 2 ♂♂, Limón, Bribri Suretka, 9 km W Bribri, 9°62'29"N-82°77'29W,




**Figures 13-22**: Pericopina male genitalia, ventral view; aedoeagus removed, lateral view. **(13)** *Dysschema intermedium,* paratype; **(14)** *D. minor,* paratype; **(15)** *D. innominatum,* paratype; **(16)** idem, detail of left valva; **(17)** *D. centenarium,* detail of left valva; **(18)** *Pseudophaloe promiscua*, paratype; **(19)** *Josiomorpha cathetozosta*, paratype; **(20)** *Josiomorphoides dognini*, holotype; **(21)** *J. gigantea*, lectotype.

9.i.1983 (*Janzen & Hallwachs*) (INBio); ♂, Limón, Siquirres, 200 m, 27.i.1973, mating with a female *P. cerealia* (*Becker*) (VOB, 3925).

**Etymology.** From the Latin 'promiscuus' = mixed (see Remarks).

Remarks. A male (VOB 3925), was collected by the author at light, mating with a female of *P. cerealia* (Druce) (VOB 3926).

*Pseudophaloe schausi* (Edwards)

*Pericopis schausi* Edwards, iii.1884: 59. Lectotype ♂, MEXICO: Ver, Jalapa (*Schaus*) (USNM), here designated [examined].

*Phaloe verania* Druce, x.1884: 107, pl. 11, fig. 7. Holotype ♂, GUATEMALA: Zapote [no further data] (*Champion*) (BMNH) [not examined]. **Syn. n.**

*Pseudophaloe veranioides* Hering, 1925: 430. Syntypes, ♂, ♀, MEXICO: [Sin]: Misantla, 11.vi [no further data] (MNHU) [not examined]. **Syn. n.**

Remarks. Druce (1884: 108) listed *P. schausi* just after the description of *P. verania* and stated that he had not seen the specimens, and that from the description he believed that it was very similar to *P. verania*. He was right. They are the same species. The type of *P. schausi* matches perfectly the figure of a syntype of *P. verania* in Watson & Goodger (1986: pl. 2, fig. 30), and that of *P. veranioides* in Hering (1925: pl. 60d). The specimens from Central and the West coast of Mexico are slightly smaller [f. *veranioides*] than typical specimens, and have the yellow areas much reduced and the red on abdomen restricted to the last two segments, otherwise identical. In the USNM there is a male, which matches this form, labeled "*schausi* Edw., *verania* Dr." in Schaus' handwriting. There is another male, with identical label as the lectotype of *P. verania*, here designated as paralectotype.

*Sermyla transversa* Walker
Figs. 10, 11

*Sermyla transversa* Walker, 1854: 461. Holotype ♂, [BRAZIL: RJ]: Rio [de Janeiro] [no further data] (BMNH) [examined].

*Sermyla morta* Schaus, 1892: 282. Holotype ♀, BRAZIL: [RJ], Petropolis (*Schaus*) (USNM, no. 11422) [examined]. **Syn. n.**

Remarks. The description of *S. morta* was based on a melanic female with its hind wings and abdomen wholly black. In the collection of UFPR there is one melanic male, collected together with a series of the normal form from Campos do Jordão, São Paulo State.

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## Editor's note

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